

Study Guide PHYSICS FOR test One Quarter One.....
See if you can answer: (use graph paper if needed)

What's the difference between an observation and a measurement of a physical property?

What's a standard for a unit of measure?

What are the three fundamental properties of physics and their English & metric units?

Convert a car that accelerates 10 inches/sec² to miles/hour per second.

Describe the difference between accuracy and precision in an experiment.

Estimate to within a power of ten the number of pencils that would fit in my teacher's desk.

Identify the control group, experimental group, independent and dependent variables in an experiment to test the effects of gravity on plant growth.

Describe the difference between distance and displacement.

Describe how to calculate average speed, velocity.

Describe the meaning and units for speed, velocity and acceleration.

Describe how to get velocity from a displacement time graph.

Describe how to get displacement and acceleration from a velocity time graph.

Be able to use the definitions of velocity and acceleration to solve for dis and time.

Describe the shape of a displacement time and velocity time graph for an object: at rest, going fast forwards, going slow backwards, speeding up going forwards and backwards, speeding up going backwards.

Use an accurate D-T graph to answer this question.

While jogging, Maria sees Jason 10 m ahead of her, walking in the same direction. If Maria is jogging at 5.0 m/s and Jason is walking at 2.0 m/s, how long will Maria have to jog before catching up to Jason?

When velocity is negative and acceleration is positive, what happens to the object's motion?

When velocity is positive and acceleration is negative, what happens to the object's motion?

Make a V-T table then draw an accurate V-T graph for this: A police car at a stoplight accelerates at 0.5 m/s^2 . A truck goes a constant 2 m/s.

When will their velocities be equal? How far has each one gone?

When will their displacements be equal? (use area on the V-T graph)

CAR		TRUCK	
TIME	VELOCITY	TIME	VELOCITY
0 s	0 m/s	0 s	2 m/s
1 s			
2 s			
3 s			
4 s			
5 s			
6 s			
7 s			
8 s			
9 s			
10 s			

Find the velocity for each section of the D-T graph. Find the average velocity of the whole trip. (Dis points: (0,0), (4,2.6),(7,8.8),(11.2,8.8),(15.5,2.9))

Find the displacement and acceleration for each section of the V-T graph. Find the average velocity of the whole trip. (Vel points: (0,+1.9), (3,+1.9), (4.8, +2.4), (7,0), (8.2, -1.2), (10.5, 0))

